# PROMOTION OF FINANCIAL WELLNESS AMONGST THE RURAL HOUSEHOLDS IN THE HILLY DISTRICTS OF UTTARAKHAND – AN EMPIRICAL PMIS STUDY

SYNOPSIS OF THE THESIS

In Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY


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*"To achieve the goals of sustainable development, critical data must be open and available for reuse by anyone, anywhere, anytime. This is the vision."*

(Tim Berners-Lee, inventor of the World Wide Web)

**Keywords** - Project Management Information System (PMIS), DeLone and McLean Information System (D&M IS)

## 1. Introduction

The population of the Uttarakhand state primarily depends on agriculture for livelihood; about 70% of the population is engaged in agriculture. Out of total reported area, only 14.02% is under cultivation. More than 55.0% of the cultivated land in the State is rainfed. The cropping intensity is 160.6%. The landholdings are small and scattered. The average land holding is around 0.68 ha (that too is divided into many patches) in the hills and 1.77 ha in the plains (Watershed Management Directorate, 2009). Hill climate is an advantage to grow variety of high value crops, fruits, off seasonal vegetables, medicinal and aromatic plants etc.. Natural disasters and climate change affect rural livelihood and impact financial sources of rural households. The other source of rural households' income is non-farm based activities.

Livelihood promotion projects work in the value chain approach on farm or non-farm activities in synchronization of food security and promotion of financial wellness (income). The food security of rural households depends on agriculture production and public distribution system (PDS). Livelihood promotion (development-oriented



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programming) involves improving the resilience of household livelihoods so that food and other basic needs can be met on a sustainable basis (Frankenberger, 1998). Project is a planned set of inter-related tasks to be executer over a fixed period and within certain cost and other limitations (Business Dictionary). Project has pre-defined set of activities, input, output and outcome, cost, time/schedule, and governed through its implementation manual or charter.

The Project Management Information System (PMIS) is a system that facilitates entire organization to manage distributed data and information, planning, implementation, monitoring and evaluation, knowledge management and support in decision-making. PMIS includes six core modules - scope (project activities), schedule (information as per time frame), budget (annual work plan and budget), and team (human resource), beneficiary and results (output and outcome). These six modules cover the entire project.

The livelihood promotion project for the financial wellness of rural households have been implement with a set goal and with specify time duration. Such type of projects has executed in the mission mode and data has maintained from the baseline. Therefore, the necessity of PMIS is from the beginning of project. However, due to time, budget constraint and other priorities, the least preference is given to PMIS and data are maintain in to scattered manner into excel sheets. Either in the beginning or middle, management should take decision on information system. The regular utilization of data, information into planning, implementation, monitoring and evaluation, learning will helps the project to fulfill the objectives and achieve the goal. Project Management Information System



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(PMIS) indirectly contributes in the success of livelihood projects and support projects to achieve its objectives.

The purpose of the research is to empirically review the effectiveness of PMIS in context of project performance or success and recommend a prototype that provides quality service to project stakeholders, faster and effective decision-making platform, make accountability and good governance.

The study use D&M IS success model for the analysis of effectiveness. The model consists of six interrelated dimensions of success: System Quality, Information Quality, System Use, User Satisfaction, Individual Impacts, and Organization Impacts (DeLone & McLean, 2002). In the D&M IS Success Model, "systems quality" measures technical success; "information quality" measures semantic success; and "use, user satisfaction, individual impacts," and "organization impacts" measures effectiveness success (McLean & DeLone, 2003). Later on D&M IS Success Model has been updated. New dimension "service quality", "intention to use" has been included and two dimensions "individual impacts" and "organization impacts" are club together in "net benefits".



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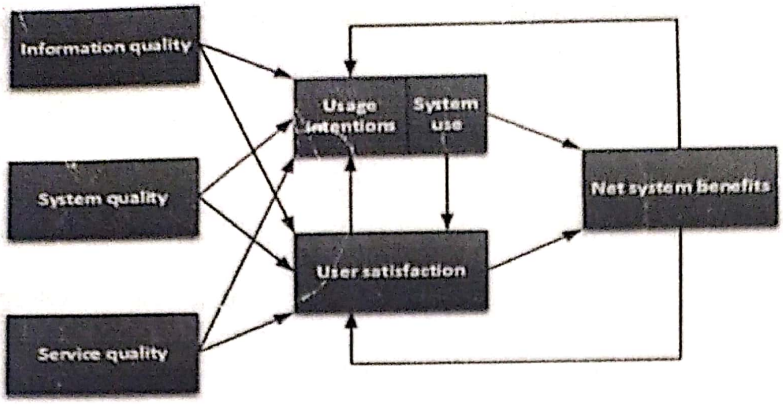


Figure 1 Update D&M IS Success Model (McLean & DeLone, 2003)

## 2. Objectives

The following are the research objectives of the study:

1. To measure the effectiveness of Project Management Information System (PMIS) for the promotion of financial wellness amongst rural households in the hill districts of Uttarakhand using DeLone and McLean model.
2. To study the effective utilization of Project Management Information System (PMIS) by the stakeholders, viz.: policy-makers, implementers, non-government agencies, cooperative societies and community representatives.

## 3. Literature Review

Thorough assessment of the Northern Brazil's Rural Poverty Reduction program reveals that a user-friendly monitoring and evaluation system facilitates subproject evaluation process, provides feedback and necessary information to improve targeting and efficiency, and is an essential management and planning tool (World Bank , 2002).

MIS provide information about the specific needs of beneficiaries (and often potential program beneficiaries), the availability of services, the quality of these services, and the



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coordination necessary to better meet the needs of beneficiary households (Villablobos, Blanco, & Bassett, 2010).

The Management Information System (MIS) operated by the M&E Unit of the secretariat proved crucial to enable Poverty Alleviation Fund project, Nepal and the Bank to track progress in meeting the core project development objective. Project outcomes in both projects were rated satisfactory or highly satisfactory, with risks to outcomes rated moderate or negligible (Lai, 2015). There are several case studies, documents indicates benefits of information system into different type of projects.

Project Management software typically features capabilities for defining and ordering tasks, assigning resources to tasks, establishing starting and ending dates for tasks, training progress, and facilitating modifications to tasks and resources (Laudon & Laudon, 2017). PMIS facilitates project planning, implementation, monitoring and evaluation purposes. It tracks and processes all key information for decision-making. The contribution of PMIS depended upon several factors. PMIS helped in the achievement of the project success while respecting the projects constraints and meeting the project objectives (Raymond & Bergeron, 2008).

The first factor that effect PMIS is its design that impacts use of information. Number of sub projects or activities indicates variety of data and information. It also reflects size and scope of PMIS. The strongest self-reported factors influencing PM software usages, both positively and negatively, are the size and complexity of projects (large and more



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complex projects pushing PM professionals to use the software more) (Liberatore & Johnson, 2003).

The D&M IS Success Model indicates multidimensional and interdependent nature of Information System success. *System quality* is directly depends upon design of PM software. It indicates realization of user requirements, usefulness of system features and functions, data and system accuracy etc..

*Information quality* measured through reliability, timeliness, sufficient, relevance, content, understandability, readability, accessible, traceable and consistency. People want information of good quality, and to obtain it they often turn to information professionals and professionally maintained information systems and resources (Mai, 2013).

*Service Quality* indicates infrastructure availability and responsiveness i.e. prompt service to users, knowledge about information extraction, troubleshooting, system maintenance.

*Use* means use by all the project stakeholders, each level in the organisation. They use the information in their planning, implementation and decision-making.

*Intention to use* measured as attitudes of information users, mainly information users and producers.



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*User Satisfaction* is measured usefulness of information in particular context for information users and producers. Information producers' satisfaction is reflects change in situation after the project implementation.

*Net Benefits* is depending upon *individual impact*, *social impact*, and *organizational impact*. *Individual impact* is closely related to performance, and so "improving my – or my department's – performance" is certainly evidence that the information system has had a positive impact (McLean R & DeLone H, 1992). Decision Quality, Forecasting accuracy, variance in planning and actual implementation of activities and budget, time taken on complete the assignment, satisfaction in job etc. are the key variable of individual impacts. *Social impact* indicates value of information, utilization of information and learning. The most obvious effect of information system has been the rise of the internet and its consequences in terms of how we communicate, socialize, learn and do business to mention but few (Olymoye, 2013). *Organisation impact* of PMIS is to measure in terms of what extent it contributes in achieving of organisation as well as project goal. In context of the study area the net-benefit of PMIS is facilitates to fulfill the project objectives, contributes in decision-making or policy, rating provided by donor etc..

## 4. Research Methodology

The study sample (primary data) takes from hill districts of Uttarakhand. A project funded by International Fund for Agriculture Development (IFAD) named Integrated Livelihood Support Project (ILSP) is working in the area. Project goal is "reducing



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poverty in hill districts of Uttarakhand" and development objective is "enable rural households to take up sustainable livelihood opportunities integrated with the wider economy" (CPCU, 2013). The project has indigenous PMIS that facilitates to capture all necessary data and access on internet. It integrates all sectors and producing information for decision-making. The sample will taken from 9 divisions, 21 blocks and 130 clusters. Sample will select through Systematic Interval Sampling.



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Table I Sample Area

| Sample | Respondents | Sampling frame available | Population | Sample (N) | Data Collection Method and Tool | Role |
|---|---|---|---|---|---|---|
| n1 | Directors | 4 | 4 | 4 | Interview Method, Open ended Questionnaire | Policy Makers |
| n2 | Managers | 15 | 15 | 15 | Survey Method, Close ended Questionnaire | Implementer, Monitoring |
| n3 | Assistant Managers | 40 | 40 | 20 | Survey Method, Close ended Questionnaire | Implementer, Monitoring |
| n4 | Field Staffs (Non-Government Agencies) | 210 | 210 | 80 | Survey Method, Close ended Questionnaire | Implementer, Monitoring |
| n5 | Livelihood Collectives (Cooperative Societies) | 1300 | 1300 | 260 | Survey Method, Close ended Questionnaire (in Hindi) | Beneficiary, Implementer |
| n6 | Community Representatives | 9 | 9 | 9 | Interview Method, Open ended Questionnaire (in Hindi) | Policy Influence, Observer |
| **Total** | | **1578** | **1578** | **388** | | |

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The broad variables as per D&M IS success model are systems quality, information quality, service quality, use, intention of use, user satisfaction and net benefits. The sub-variables under the main variables to be define through the literature review.

A questionnaire with the 5 points scales will be prepared for sub-variables under the main variables. The questionnaire will prepare in English and Hindi languages due to the target sample. The survey will conduct by the research through personal field visits. Another open-ended questionnaire will be prepared for data collection through interview method. The open-ended questionnaire will cover the main parameters of D&M IS success model.

The secondary data collection will do through available literatures i.e. papers, case studies, and other related literatures from the similar nature of projects; those are already used or using the information system.

After the finalization of data collection tool, a pilot testing will be done at manager's level. The questionnaire will be update if needed as per pilot testing; otherwise, the data collection process will started. The data analysis will do in SPSS[1] with following statistical test - Frequency Distributions, Correlation, Chi Square and ANOVA[2] and Multiple Regression.

[1] Statistical Package for the Social Sciences
[2] Analysis of Variance

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Table II Proposed Time schedule

| S.N. | Activity | Start | Completion |
|---|---|---|---|
| 1 | Complete Literature Review | - | December 2018 |
| 2 | Prepare Questionnaire | November 2018 | December 2018 |
| 3 | Pilot Testing | January 2019 | January 2019 |
| 4 | Primary Data Collection | January 2019 | March 2019 |
| 5 | Secondary Data Collection | - | Ongoing |
| 6 | Data Analysis | April 2019 | April 2019 |
| 7 | Thesis | Ongoing from April 2019 | - |

## 5. Limitations of the Study

The study is doing empirical test to measure the effectiveness of PIMS for specific theme based project. The Project success depends upon the several other internal and external factors; however, PMIS provide only a platform for data maintenance, information management, report generation, decision-making, planning, monitoring & evaluation, knowledge management and covering its core modules. e.g. one of the critical success factors of management information is Active support from senior management (Ibach, 1999). This is one of the major limitations of the study. Several studies have been conducts on the D&M IS success model in different sector majority is in e-Commerce. In the sector of livelihood promotion, the model is yet to be test empirically. This is the second limitations of the study. The third limitation is poor connectivity to rural access in some of the areas.



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## 6. Tentative Chapterization of the Proposed Thesis

### 6.1. Data Analysis

### 6.2. Summary and Conclusion

### 6.3. Recommendation

## 7. Reference


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